

SLUDGERFUND

Fact Sheet

COMMENCEMENT BAY NEARSHORE/TIDEFLATS Tacoma, Washington



U.S. ENVIRONMENTAL PROTECTION AGENCY

July 2000

Occidental Chemical Removal Action Tacoma, Washington

EPA is Proposing a Cleanup Remedy for Area 5106 and Would Like to Hear Your Comments

Your comments are invited on a proposal to clean up contaminated sediment off the former Occidental Chemical facility, located at the mouth of the Hylebos Waterway. The sediment in this off-shore area is known as Area 5106.

The U. S. Environmental Protection Agency (EPA) is proposing removal, treatment, and disposal of the contaminated sediment in Area 5106. The area is being separated from the rest of the Hylebos cleanup action as a removal action due to the type of contaminants and the chemical concentrations in the sediment.

Area 5106 sediment requires treatment prior to being placed in a disposal site with other Hylebos sediment. EPA's decision to propose removal, treatment, and disposal of the sediment is explained in a document called an Engineering Evaluation/Cost Analysis (EE/CA). The EE/CA includes a summary and analysis of all the cleanup options considered for Area 5106.

Copies of the EE/CA are available for review at: the Tacoma Public Library, 1102 Tacoma Avenue South, Tacoma, WA; Citizens for a Healthy Bay, 917 Pacific Avenue, Suite 406, Tacoma, WA; and the U. S. EPA Regional Office, 1200 Sixth Avenue, Seattle, WA.

After the close of the public comment period, EPA will review and consider all comments and respond to them in a Responsiveness Summary. EPA will then prepare a final Action Memorandum which will officially select a final cleanup action.

Written comments should be sent by

August 25th to:
Ken Marcy, Project Manager
U.S. Environmental Protection Agency
1200 Sixth Avenue (ECL - 111)
Seattle, Washington 98101

Background

The Commencement Bay Nearshore/Tideflats (CB/NT) Superfund Site is located in Tacoma, Washington at the southern edge of Puget Sound. EPA placed the site on the National Priorities List for cleanup under Superfund on September 8, 1983. Since the late 1800s, shipbuilding, oil refining, chemical manufacturing and storage, and other industrial activities have caused hazardous waste contamination of the land and water in the Commencement Bay area. Many of these contaminants have affected marine life. The cleanup goal for the site is to have a healthy marine environment and protect people from eating contaminated seafood from the Bay. This goal was established in EPA's 1989 cleanup plan.

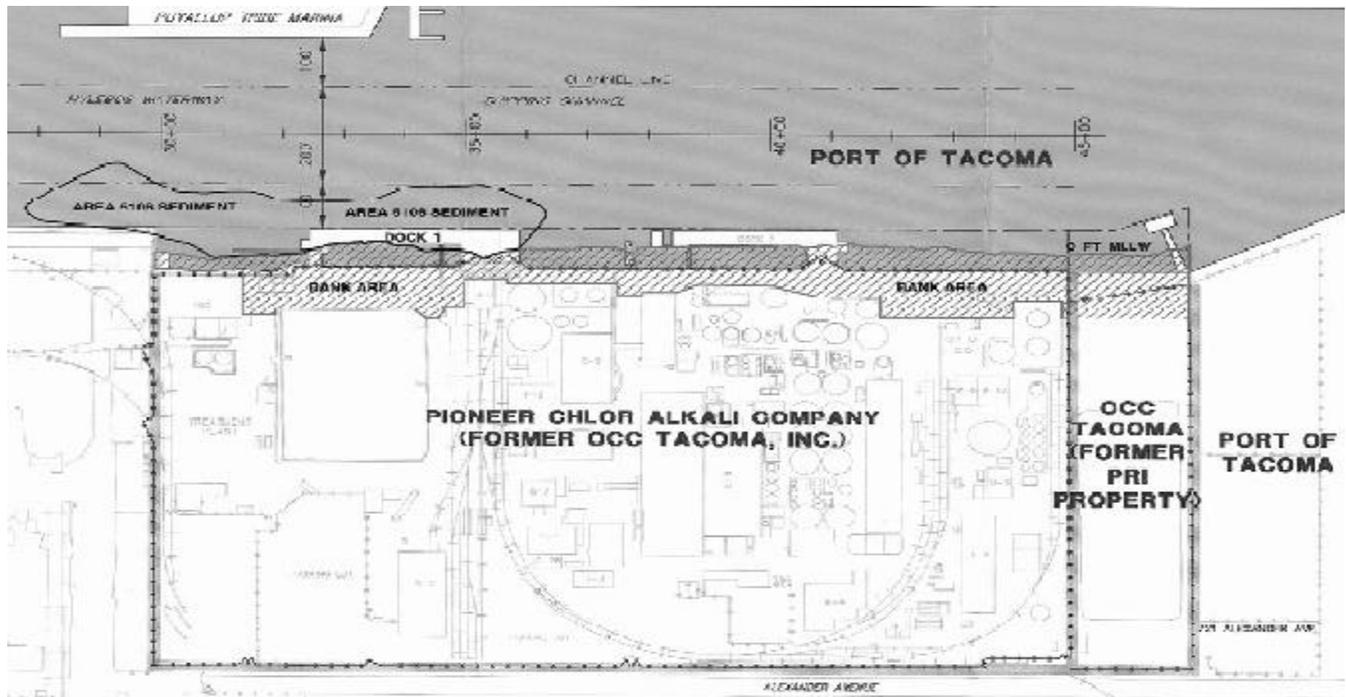
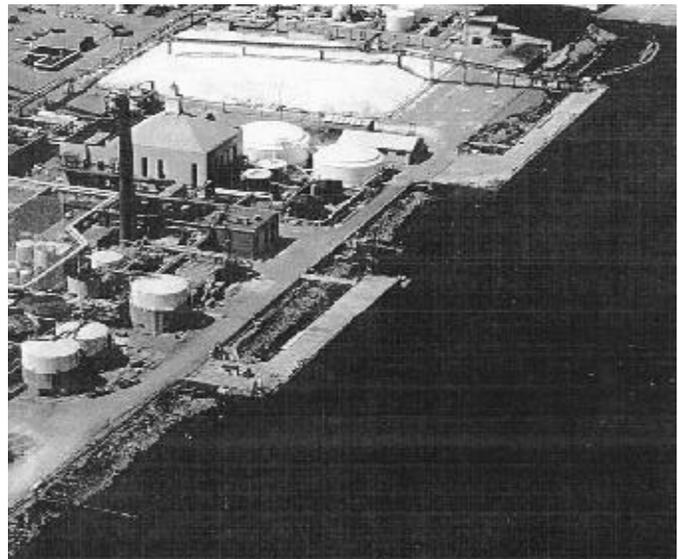


The CB/NT site includes the Hylebos, Sitcum, St. Paul, Middle, Wheeler-Osgood, and Thea Foss Waterways, the Puyallup River upstream to the Interstate-5 bridge, and adjacent land areas. The sediment cleanups have been completed for the St. Paul and Sitcum Waterways. EPA is now working to clean up four remaining waterways: Hylebos, Thea Foss, Wheeler Osgood, and Middle.

The former Occidental Chemical facility (currently owned by Pioneer), is located on Alexander Avenue adjacent to the mouth of the Hylebos Waterway. From 1947 to 1973, a chlorinated solvents process operated at the site producing tetrachloroethene (PCE) and trichloroethene (TCE). During this period, wastewater from the process was discharged to the Hylebos Waterway, either directly, or after solids had settled out in upland ponds.

In 1994, samples taken in the area showed high levels of PCE, TCE, and other contaminants. In November, 1997, the EPA and Occidental entered into an agreement to clean up the con-

taminated bank area of the Occidental Chemical facility, and study and look at cleanup options for Area 5106. Area 5106 sediment is the area of contaminated intertidal and subtidal sediment off-shore of the Occidental facility. Public comments are now being taken on the proposed cleanup options (EE/CA) for Area 5106. A separate document will go out for public comment in the Fall of 2000 on the cleanup of the bank area.





EE/CA Alternatives

An EE/CA must be completed for all non-time-critical removal actions. The purpose of the EE/CA is to identify and assess cleanup alternatives in terms of cost, effectiveness, and implementability. EPA considered four potential alternatives for the Area 5106 EE/CA: no further action, containment, removal/treatment/disposal, and combined containment and removal.

Alternative 1 No Further Action: EPA is required by law to include the no-further-action alternative. In the Area 5106 EE/CA it is provided only for comparison with other removal action alternatives.

Alternative 2 Containment: Containment through capping of Area 5106 with clean sediment would be designed to isolate contaminated sediments preventing direct contact and release of contaminated water in excess of acceptable standards. While potentially effective, EPA considered containment to be less effective than removal because the risks posed by leaving highly contaminated sediment in an industrial waterway are too great.

Alternative 3 Removal/Treatment/Disposal: This alternative proposes removal of all Area 5106 sediment with a submersible dredge pump called a "Toyo" pump. Contaminated Area 5106 sediment and water mixed together, called "slurry", will be pumped to a treatment facility on the property adjacent to the former Occidental Facility. In the fully enclosed treatment process, called "slurry aeration", the sediment would be heated with steam and maintained at a temperature of 45 degrees Celsius or 113 degrees Fahrenheit. Simultaneously, air would be added at the bottom of the tank at a rate of about 1000 cubic feet per minute. Target contaminants, such as TCE and PCE would become vapor and be removed through vapor carbon beds. The treated sediment would then be pumped to barges moored along the bank for settling and dewatering. After settling, the

treated water would be pumped to a storage tank to be recycled into the treatment process, and the treated sediment would be transported to Slip 1 in the Blair Waterway for disposal.

Alternative 4 Combined Containment and Removal: The last alternative consists of a combination of the capping and removal methods already described. The portion of Area 5106 sediment between the shore and the face of the existing docks would be capped, while 5106 sediment from the face of the docks into the Hylebos Waterway would be removed with the Toyo pump. It would then be treated and disposed of as described in the previous option. While the cost of this alternative is less than that for complete removal of Area 5106 sediment, EPA feels that the cost difference does not justify the risks associated with leaving material in place.

EPA's Proposed Alternative

EPA is proposing that all of the Area 5106 material be removed, treated using slurry aeration, and disposed of in Slip 1 as described in alternative 3. Given the nature of the material and the heavy boat traffic in the Hylebos Waterway, EPA feels that the risks associated with doing nothing, or leaving contaminated material in place are too great. Removal/Treatment/Disposal is the only option which does not leave contaminated material in the Hylebos Waterway.

Under the broad umbrella of Removal/Treatment/Disposal, a number of options are possible, all of which were thoroughly evaluated by EPA. Removal options considered included a wide range of dredging technologies. Evaluation of these dredge methods are included in the EE/CA. EPA selected the Toyo pump because it created less resuspension of sediment than mechanical dredges, pumped at a higher solids content than most hydraulic dredges (necessary for smooth feed of the treatment process), and had been more thoroughly tested



than other specialty dredges.

EPA considered many in-place and upland treatment options as outlined in the EE/CA. After a preliminary screening, evaluation focused on the following technologies: Incineration, thermal desorption, slurry aeration/oxidation, and in situ oxidation. EPA selected slurry aeration because it performed extremely well in pilot tests using Area 5106 material, was much less expensive than either incineration or thermal desorption, and was a more proven technology than in situ oxidation.

EPA considered upland hazardous waste disposal, upland disposal on the current Occidental property adjacent to the former facility, and disposal in a nearshore fill. EPA selected disposal in a nearshore fill because upland hazardous waste disposal was determined to be too expensive and the Occidental property too small for disposal of 5106 sediment. Since information was available on Blair Slip 1, an evaluation was completed which showed that

a facility similar to Slip 1 would be appropriate for disposal of the treated Area 5106 sediment.

Potential Schedule

Dredging of Area 5106 sediment may begin as soon as a disposal site has been constructed. EPA would like to begin actual removal and treatment of Area 5106 sediment in 2001, completing the action by early 2002. Construction of the treatment plant could begin as early as spring, 2001.

Future Updates and Community Involvement

EPA will continue to send fact sheets about the Area 5106 Removal Action as design for the site proceeds. Once site preparation begins and the date when treatment equipment will arrive is known, EPA will put out another fact sheet. Interested parties may contact EPA at any time for additional information.



For More Information:

If you have questions or would like more information about the Area 5106 Removal Action, please contact:

Ken Marcy, EPA Project Manager, at (206) 553-2782; email - marcy.ken@epa.gov

Jeanne O'Dell, EPA Community Involvement Coordinator, at (206) 553-6919; email - odell.jeanne@epa.gov

or call EPA's toll free number
1-800-424-4372

To review documents concerning activities at the Area 5106 Removal Action site, you may visit information repositories located in Tacoma and Seattle:

In Tacoma:

Tacoma Main Public Library
1102 Tacoma Avenue South
Northwest Room

Citizens for a Health Bay
917 Pacific Avenue, Suite 406
(253) 383-2429

Please call for an appointment if information is needed after business hours.

In Seattle:

U.S. Environmental Protection Agency
1200 Sixth Avenue
Records Center - 7th Floor

To ensure effective communication with everyone, additional services can be made available to persons with disabilities by contacting one of the numbers listed above.



United States
Environmental Protection
Agency

Region 10 (ECO-081)
1200 Sixth Avenue
Seattle WA 98101

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